

WHAT IS CLAIMED IS:

1. A meltblown fiber comprising at least 20% by weight polyester selected from the group consisting of poly(ethylene terephthalate) having an intrinsic viscosity of less than 0.55 dl/g, and poly(trimethylene terephthalate) having an intrinsic viscosity of less than 0.80 dl/g.
- 5
2. The meltblown fiber of claim 1 wherein the fiber has an average effective diameter of less than 10 microns, and wherein the intrinsic viscosity of the poly(ethylene terephthalate) is in the range of 0.20 to 0.50 dl/g and the intrinsic viscosity of the poly(trimethylene terephthalate) is in the range of 0.45 to 10
0.75 dl/g.
- 15
3. The meltblown fiber of claim 2 wherein the intrinsic viscosity of the poly(ethylene terephthalate) is in the range of 0.25 to 0.45 dl/g and the intrinsic viscosity of the poly(trimethylene terephthalate) is in the range of 0.50 to 0.70 dl/g.
- 15
4. The meltblown fiber of claim 1 wherein said fiber is a multiple component fiber comprised of between 20% and 98% by weight of poly(ethylene terephthalate) and between 80% and 2% by weight of a second polymer component.
- 20
5. The meltblown fiber of claim 4 wherein said second polymer component comprises of at least 10% of polyethylene polymer.
- 25
6. A web of meltblown fibers, said web comprised of at least 20% by weight polyester selected from the group consisting of poly(ethylene terephthalate) having an intrinsic viscosity of less than 0.55 dl/g, and poly(trimethylene terephthalate) having an intrinsic viscosity of less than 0.80 dl/g.
- 30
7. The web of claim 6 the fibers of the web have an average effective diameter of less than 10 microns, and wherein the intrinsic viscosity of the poly(ethylene terephthalate) is in the range of 0.20 to 0.50 dl/g and the intrinsic viscosity of the poly(trimethylene terephthalate) is in the range of 0.45 to 0.75 dl/g.

8. The web of claim 7 wherein the intrinsic viscosity of the poly(ethylene terephthalate) is in the range of 0.25 to 0.45 dl/g and the intrinsic viscosity of the poly(trimethylene terephthalate) is in the range of 0.50 to 0.70 dl/g.

5 9. The web of claim 6 wherein the web is comprised of multiple component fibers and the web is comprised of between 20% and 98% by weight of poly(ethylene terephthalate) and between 80% and 2% by weight of a second polymer component.

10 10. The web of claim 9 wherein said second polymer component comprises at least 10% by weight of polyethylene polymer.

11. A composite sheet comprising:

a first fibrous layer having a first side and an opposite second side;

15 a second fibrous layer bonded to said first side of said first fibrous layer;

20 said first fibrous layer being a meltblown web comprised of at least 20% by weight polyester selected from the group consisting of poly(ethylene terephthalate) having an intrinsic viscosity of less than 0.55 dl/g, and poly(trimethylene terephthalate) having an intrinsic viscosity of less than 0.80 dl/g;

25 said second fibrous layer comprised of at least 95% by weight of meltspun fibers;

 said composite sheet having a basis weight of less than 120 g/m², and a hydrostatic head of at least 10 cm.

12. The composite sheet of claim 11 wherein
25 at least 10% of the meltblown fibers in said first fibrous layer are multiple component fibers having a length,

2025 RELEASE UNDER E.O. 14176

said multiple component fibers having first and second polymer components arranged in a manner such that said first and second polymer components each extend substantially the complete length of said bicomponent fibers.

5 13. The composite sheet of claim 12 wherein said first and second polymer components of said bicomponent meltblown fibers are arranged in a side-by-side arrangement.

14. The composite sheet of claim 12 wherein
said first polymer component comprises between 20% and 98% by
10 weight of said first fibrous layer and said second polymer component comprises
between 80% and 2% of said first fibrous layer, and

 said second polymer component of said first fibrous layer consists
essentially of polyethylene.

15 15. The composite sheet of claim 14 wherein the meltspun fibers of
said second fibrous layer are multiple component fibers having a polyester
component and a polyethylene component, wherein the polyester component
comprises at least 10% by weight of the second fibrous layer and the polyethylene
component comprises at least 10% by weight of the second fibrous layer.

16. A garment comprised of the composite sheet of claim 11.
20 17. A meltblown fiber comprising at least 20% by weight polyester
having a weight average molecular weight of less than 25,000.

 18. The meltblown fiber of claim 17 wherein said polyester has a
weight average molecular weight in the range of 5,000 to 22,000.

25 19. The meltblown fiber of claim 18 wherein said polyester has a
weight average molecular weight in the range of 10,000 to 19,000.

 20. The meltblown fiber of claim 17 wherein said polyester is
poly(ethylene terephthalate).